A JAVA-Based Tool for Remote Access to Emergency Protocols

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Dissemination of Protocols over the World Wide Web

We have developed various multimedia tools to represent, store and disseminate practice guidelines and protocols over the World Wide Web (WWW) [1]. Our approach enhances translation of guidelines and protocols from paper to computer-based flowchart representations, linked to multimedia information.

Users can browse the algorithm with a friendly user interface and access related multimedia information each clinical problem. Guidelines and protocols can be stored in a computer server and distributed over the WWW, facilitating dissemination, local adaptation, updating and evaluation.

We have created different computing tools, using an object oriented methodology in the development process, with C++ and JAVA implementations. Multimedia information such as images, video, and sound can be linked to any part of the algorithm. Guidelines and protocols can be stored in specific files and databases that can be accessed over the WWW, retrieved and used in decision-support systems at remote locations.

An important reason for local adaptation is variability in medical practice. Thus, we created functionalities for graphical edition in our C++ tools. Users can modify nodes, arcs, contents, and multimedia links to adapt guidelines to specific clinical environments and circumstances.

A JAVA version of the visualization tool has been completed. It is being evaluated and can be accessed over the net, using any WWW browser with JAVA compliance. Thus, it facilitates platform-independent access and display of multimedia information of any protocol.

An Implementation for Medical Assistance in Emergencies

An implementation of emergency protocols used in disaster situations has been carried out in collaboration with specialists from the main Spanish medical Army center, the hospital Gomez-Ulla, Madrid. We created those protocols working with an experts' panel, using an informal consensus method.

Our approach is a new direction on a previous research effort that we made to create different models and computing tools for medical care and coordination in disasters [2,3]

Our goal is to disseminate emergency protocols over the WWW, evaluating agreement and consensus among various military centers, decreasing variability in medical practice. Our system can also be employed as a teaching tool, accessing multimedia information related to a problem. Such an interactive system can be particularly useful to train military and paramedical personnel in decision-making on catastrophe and emergency situations.

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